

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-018989**Date Inspected:** 30-Dec-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** Gary Ersham and Pat Swain**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Orthotropic Box Girder**Summary of Items Observed:**

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

The following deck access hole infill plate to top deck plate welding was observed;

1. At OBG 8W-PP70.5-W5-SE inside – ABF welder Jorge Lopez was observed continuing to perform 4G Shielded Metal Arc Welding (SMAW) back welding fill pass on the infill plate to top deck plate butt joint. The welder was noted using 1/8” diameter E7018H4R electrode. At the end of the shift, fill pass welding was still in progress and should continue tomorrow.

2. At OBG 3W-PP23.5-W3-N inside/outside - ABF welder Jin Pei Wang was observed continuing to perform 4G SMAW welding/fixing undercut and underfill on QC noted defects of the butt joint. The welder was noted using 1/8” diameter E7018H4R electrode. After its completion, the welder has moved outside of the same access hole and welded fill pass on the joint. During outside welding, the welder was noted using 5/32” diameter electrode and was having 167 amperes at his machine at the time of welding. At the end of the shift, fill pass welding was still continuing and should continue tomorrow.

3. At OBG 3W-PP19.5-W2-TS inside – ABF welder Mick Chan was observed continuing to perform 3G SMAW welding root/ fill pass on the transverse stiffener plate splice butt joint. The welder was noted using 1/8” diameter E7018H4R electrode and was having 127 amperes at his machine at the time of welding. At the end of the shift, fill pass welding was still in progress and should continue tomorrow.

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4. At OBG 3W-PP19.5-W5-S outside - ABF welder Han Wen Yu was observed 4G SMAW welding fill pass on the infill plate to top deck plate. The welder was noted using 5/32" diameter E7018H4R electrode. At the end of the shift, fill pass welding on this location was still continuing which should remain tomorrow.

The welders working on the deck access hole mentioned above were noted welding/implementing Caltrans approved welding procedure specification ABF-WPS-D15-1010 Revision 1. All welders and their welding parameters were also monitored by ABF QC Gary Ersham.

At OBG 8W/9W top deck plate 'A2' outside, QA randomly observed ABF/JV qualified welder Wai Kitlai perform CJP repair welding. The welder was noted welding in 1G (Flat) position utilizing Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1001 Repairs. The four repairs were excavated to a boat shape profile and were tested with Magnetic Particle Testing (MT) prior welding. During welding, ABF QC Pat Swain was noted monitoring the welder and his welding parameters. Welding parameter measured at the time of welding was 140 amperes which appears in compliance to the WPS. The locations of the repairs were noted below;

Location Y-dimension Length Width Depth Remarks

1. A2 500mm 120mm 20mm 13mm Completed
2. A2 3760mm* 630mm 26mm 14mm Completed

Note: * This Y-dimension was a combined excavation from two original Y-dimensions which were Y-3810mm and Y-4000mm.

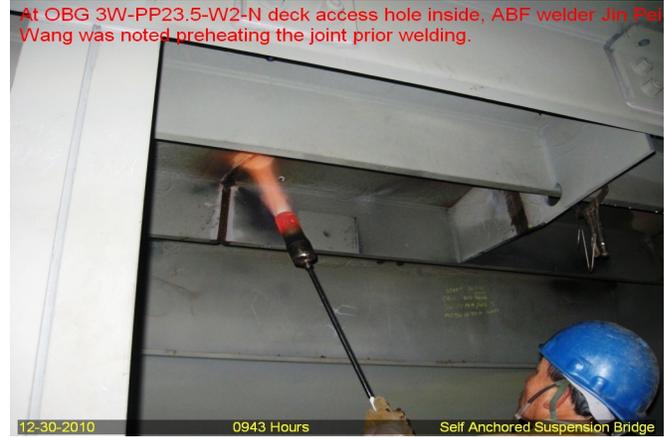
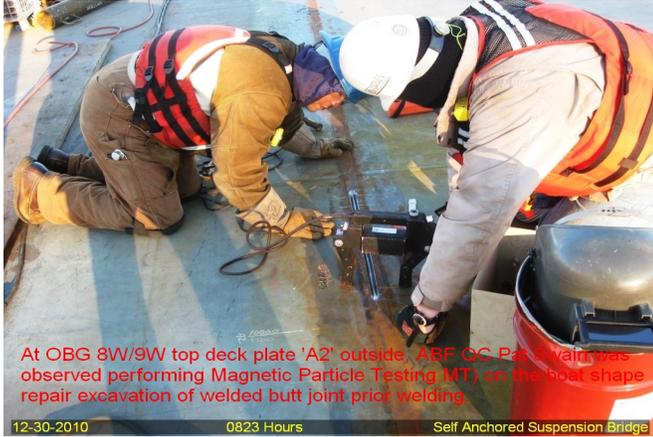
This QA performed 10% MT verification at the following lifting lug access holes and longitudinal stiffeners welded butt joints. Please see TL-6028 report for more information.

1. OBG 4E-PP25-E4-#1 to #4 lifting lug access hole restoration outside – no defects noted.
2. OBG 8W/9W LS1 to LS6 longitudinal stiffeners inside - no defects noted.



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Summary of Conversations:

No significant conversation occurred today.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Nina Choy, 510-385-5910, who represents the Office of Structural Materials for your project.

Inspected By: Lizardo, Joselito

Quality Assurance Inspector

Reviewed By: Mertz, Robert

QA Reviewer